

REMARKS

In the Final Office Action of December 17, 2009, claims 1, 2 and 4 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over JP-04120900 (“Nonaka”) in view of U.S. Patent No. 2,716,462 (“Brennan ‘462”). In addition, claims 5-10 were rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Nonaka in view of Brennan ‘462, U.S. Patent No. 4,668,588 (“Kishima”), U.S. Patent No. 2,408,038 (“Brennan ‘038”) and/or U.S. Patent No. 3,093,207 (“Bozak”).

In response, Applicants has amended the independent claim 1 to more clearly distinguish the claimed invention from the cited references. In particular, the subject matter of claim 5 has now been added to the independent claim 1 with additional limitations. As a result, claim 5 has been canceled. In addition, the previously added limitations have been deleted from the independent claim 1 and rewritten as new claims 20 and 21. Applicants have also added new claim 22. Furthermore, Applicants also submit herewith an IDS. As amended, Applicants respectfully assert that the independent claim 1 is not obvious over Nonaka in view of Brennan ‘462 and Kishima, as explained below. In view of the following remarks, Applicants respectfully request the allowance of pending claims 1, 2, 4, 6-10 and 20-22.

A. Patentability of Amended Independent Claim 1

As amended, the independent claim 1 includes the subject matter of the now-canceled claim 5. Thus, the rejection of claim 5 will be addressed to show that the amended independent claim 1 is patentable over the cited references.

Claim 5 was rejected under 35 U.S.C. 103(a) as allegedly being obvious over Nonaka in view of Brennan ‘462 and Kishima. However, Applicants respectfully assert that it is not obvious to combine the teachings of these cited references to derive the claim invention as recited in the amended independent claim 1. As such, Applicants respectfully request that the amended independent claim 1 be allowed.

As indicated on page 4 of the Final Office Action, Nonaka does not teach heating a polyphosphazene resin that is coated on a surface of a diaphragm for a loudspeaker before curing the polyphosphazene resin. Brennan ‘462 also does not teach such a step. However, the Office Action asserts that Kishima teaches heating a UV curable paint before being cured “in order to improve the surface properties of the resulting polymer layer.” The Office Action then alleges that “it would have been obvious to a person of ordinary skill in the art at the time of invention to heat the deposited liquid polymer layer for some time before UV curing it in order to remove the solvent from the layer and produce a cured polymer layer with better surface properties.” Applicants respectfully disagree.

First of all, Kishima deals with polycarbonate molded articles for “wall material for green house, ceiling material, partition wall material, wall material for sunroom, substitute for windbreak glass, and the like, utilizing their transparency,” as explained in column 6, lines 15-21. Thus, the UV ray setting paint described in Kishima has nothing to do with a diaphragm of a loudspeaker. Furthermore, the properties of the resulting cured layer described in Kishima may be inappropriate for a diaphragm of a loudspeaker. Thus, it would not be obvious to apply the teachings of Kishima for a construction material to a coating on a surface of a diaphragm of a loudspeaker, such as the polyphosphazene resin described in Nonaka.

Second, Kishima teaches drying a primer and a UV setting paint “to make the solvents evaporate completely.” Thus, Kishima fails to teach “*heating the at least one liquid plastic applied on the surface of the membrane to produce a more uniform distribution of the at least one liquid plastic on the surface of the membrane*” (emphasis added), as recited in the amended independent claim 1. Thus, even if the teachings of Nonaka, Brennan ‘462 and Kishima are combined, the claimed invention as recited in the amended independent claim 1 cannot be derived.

Third, Kishima teaches the drying step with respect to a particular primer and a particular UV setting paint. There is no indication that such drying step can or should be applied to the polyphosphazene resin described in Nonaka. Thus, it would not be obvious to apply the teachings of Kishima to the polyphosphazene resin described in Nonaka.

For the above reasons, Applicants respectfully assert that the amended independent claim 1 is not obvious over Nonaka in view of Brennan '462 and Kishima. As such, Applicants respectfully request that the amended independent claim 1 be allowed.

B. Patentability of Dependent Claims 2, 4, 6-10 and 20-22

Each of the dependent claims 2, 4, 6-10 and 20-22 depends on the amended independent claim 1. As such, these dependent claims include all the limitations of the amended independent claim 1. Therefore, Applicants submit that these dependent claims are allowable for the same reasons as the amended independent claim 1. Furthermore, these dependent claims may be allowable for additional reasons.

Applicants respectfully request reconsideration of the claims in view of the remarks made herein. A notice of allowance is earnestly solicited.

Respectfully submitted,
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Date: March 17, 2010

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